

TITLE OF THE INVENTION

BIOCONJUGATES AND DELIVERY OF BIOACTIVE AGENTS

ABSTRACT OF THE DISCLOSURE

5 The present invention relates to bioconjugates and the delivery of bioactive agents which
are preferably targeted for site-specific release in cells, tissues or organs. More particularly, this
invention relates to bioconjugates which comprise a bioactive agent and an organocobalt
complex. The bioactive agent is covalently bonded directly or indirectly to the cobalt atom of
the organocobalt complex. The bioactive agent is released from the bioconjugate by the cleavage
10 of the covalent bond between the bioactive agent and the cobalt atom in the organocobalt
complex. The cleavage may occur as a result of normal displacement by cellular nucleophiles
or enzymatic action, but is preferably caused to occur selectively as a predetermined release site
by application of an external signal. The external signal may be light or photoexcitation, i.e.
photolysis, or it may be ultrasound, i.e. sonolysis. Further, if the photolysis takes place in the
15 presence of a magnetic field surrounding the release site, the release of the bioactive agent into
surrounding healthy tissue is minimized.